Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Currently Amended) An image processing apparatus <u>for gradation transformation</u> <u>processing of an abdominal image which includes a spinal region and a gas region,</u> comprising:

first means for obtaining a processed image by sorting pixels of ~~an original~~ <u>the</u> <u>abdominal</u> image into an order from pixels having higher pixel values to pixels having lower pixel values;

second means for calculating a characteristic value from a predetermined region of the processed image; and

gradation transforming means for executing gradation transformation processing of the ~~original~~ <u>abdominal</u> image based on the characteristic value<u>,</u>

<u>wherein the predetermined region is set at a position apart from low-pixel-value-region side of the processed image by a distance corresponding to the spinal region.</u>

2.   (Currently Amended) The apparatus according to claim 1, further comprising:

irradiation region recognizing means for extracting an irradiation region from the ~~original~~ <u>abdominal</u> image,

wherein said first means executes the sorting of images within the extracted irradiation region.

3-4.   (Canceled)

5.   (Currently Amended) ~~An~~ <u>The</u> ~~image processing~~ apparatus <u>according to claim 1, further</u> comprising:

radiation generating means for generating radiation; <u>and</u>

<u>image pickup means for picking up an abdominal image created by radiation</u> <u>transmitted through the abdomen of an object.</u>

~~a two-dimensional X-ray sensor for transforming the radiation into an original~~ ~~image;~~

~~first means for obtaining a processed image by sorting pixels of the original image into an order from pixels having higher pixel values to pixels having lower pixel values;~~

~~second means for calculating a characteristic value from a predetermined region of the processed image; and~~

~~gradation transforming means for executing gradation transformation processing of the original image based on the characteristic value.~~

6-8.   (Canceled)